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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/069,523

06/12/2002

Shogo Ishioka

020238

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12/19/2005

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EXAMINER

DOLE, TIMOTHY J

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,523

Applicant(s)

ISHIOKA ET AL.

Examiner

Timothy J. Dole

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 27, 2005 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Soiferman.

Referring to claims 1 and 9, Soiferman discloses an inspection apparatus for inspecting a circuit wiring of a circuit board (abstract), said inspection apparatus comprising: a conductive member (fig. 2 (10)) disposed on one of the surfaces of said circuit board (fig. 2 (16), (17) and (18)) and to be supplied with an inspection signal (column 4, lines 22-29); means for supplying the inspection signal to said conductive member (fig. 1 (11)); a plurality of cells (fig. 2 (12) and column 4, lines 52-54) disposed

on the other surface of said circuit board (fig. 2); and means for acquiring each signal appearing at said cells in response to said inspection signal applied to said conductive member (column 5, lines 16-19). It should be noted that insulation layers (17) and (18) of Soiferman are considered to be part of the circuit board being tested.

Referring to claim 2, Soiferman discloses the apparatus as claimed wherein said conductive member includes a surface formed in conformity with said one surface of said circuit board (fig. 2), and said cells are two-dimensionally arranged in conformity with said other surface of said circuit board (fig. 2 and column 4, lines 41-43).

Referring to claim 3, Soiferman discloses the apparatus as claimed wherein said conductive member has a flat plate shape (fig. 2).

Referring to claim 5, Soiferman discloses the apparatus as claimed wherein said cells are arranged in a matrix form (column 7, lines 1-3).

Referring to claim 6, Soiferman discloses the apparatus as claimed which further includes: means for generating image data representing the position and shape of said circuit wiring, according to the signals appearing at said cells (column 5, lines 35-47); and means for displaying the image (column 5, lines 47-49).

Referring to claim 7, Soiferman discloses the apparatus as claimed which further includes storing means having thereon stored wiring data representing the position and shape of said circuit wiring (column 5, lines 60-61).

Referring to claim 8, Soiferman discloses the apparatus as claimed which further includes: storing means having thereon stored wiring data representing the position and shape of the circuit wiring (column 5, lines 60-61); means for detecting a disconnection,

short-circuit or chipping in said circuit wiring, or a dust on said circuit board according to the signals appearing at said cells and said wiring data (column 5, lines 50-58).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soiferman in view of Cilingiroglu.

Referring to claim 4, Soiferman discloses the apparatus as claimed except wherein said conductive member is composed of a plurality of conductive pieces.

Cilingiroglu discloses an inspection apparatus wherein said conductive member is composed of a plurality of conductive pieces (fig. 5 (502-504)).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the plurality of conductive pieces of Cilingiroglu into the apparatus of Soiferman for the purpose of making the apparatus more versatile by making it possible to only provide testing at desired locations.

Response to Arguments

Art Unit: 2858

6. Applicant's arguments filed October 27, 2005 have been fully considered but they are not persuasive.

7. In response to Applicants arguments with respect to claims 1 and 9, that “the energizing plate 10 of Soiferman is not disposed on the surface of the BUT 16, since instead the energizing plate 10 is actually disposed on the insulation layer 17” and “the electromagnetic sensor 12 is not disposed on the surface of the BUT 16, since instead it is disposed on the insulation layer 18” (response after final, page 10, first paragraph), it should be note that as now stated in the rejection above, the insulation layers 17 and 18 of Soiferman are considered to be part of the circuit board being tested. Figure 5 of the Applicants current application shows protective film layer (101) and base layer (102) that are located between the circuit wiring and the conductive member and plurality of cells, respectively; and are considered by the Applicants to be part of the circuit board. Therefore, the insulation layers of Soiferman that are located between the circuit wiring and the energizing plate and sensors, respectively; are also considered to be part of the board under test. It should further be noted that it is necessary for an insulating medium to exist between the circuit wiring being tested and the conductive member/plurality of cells, so that the circuit wiring is not shorted out whereby rendering the capacitive measuring device useless. This is realized and accounted for by both Soiferman, as evidenced by the insulating layers shown in figure 2, and by the Applicants, as evidenced by the protective film layer and base layer as shown in figure 5. Therefore, since the insulation layers of Soiferman are considered to be part of the board under test, the energizing plate and sensors are considered to be disposed on one of the surfaces of the circuit board.

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Conclusion

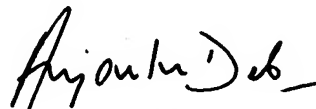
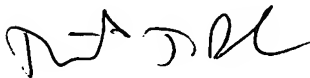
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Dole whose telephone number is (571) 272-2229.

The examiner can normally be reached on Mon. thru Fri. from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJD



ANJAN DEB
PRIMARY EXAMINER